



VERUS ENGINEERING

Engine Mount Kit – Mk5 Toyota Supra Install Manual



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Release Date: 2022/10/15
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Document Revisions

Rev	Date	Author	Description
01	2022/10/15	T. Lang	Initial release of install manual

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1. Introduction

1.1. Overview: Detailed instructions on installing the Verus Engineering Engine Mounts for the Mk5 Toyota Supra.

1.2. Difficulty: Difficult

1.3. Time Required: 4+ hours

1.4. Tools Needed:

- 1.4.1. Ratchet, Most Likely 3/8"
- 1.4.2. 13mm Socket
- 1.4.3. 8mm Socket
- 1.4.4. 10mm Socket
- 1.4.5. E12 External Torx Socket
- 1.4.6. E14 External Torx Socket
- 1.4.7. 24" 3/8" Drive Extension
- 1.4.8. 3/8" Drive Universal Swivel Socket
- 1.4.9. 4" 3/8" Drive Extension
- 1.4.10. Long Panel Popper / Push Clip Tool.



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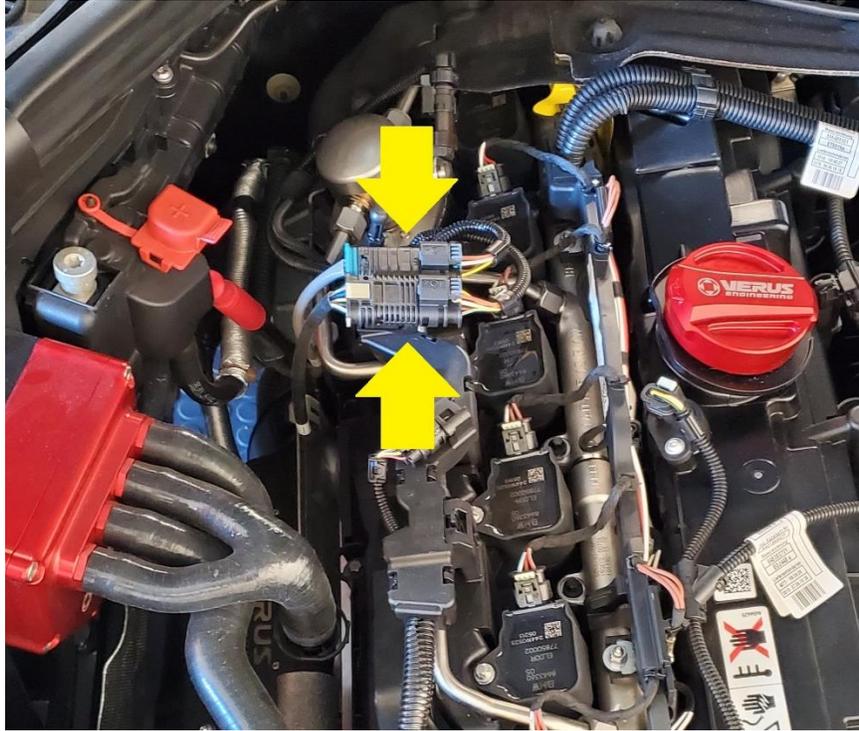
1.5. Engine Mount Components

- 1.5.1. (2) Engine Mount Base
- 1.5.2. (2) Engine Mount Bushing Retainer
- 1.5.3. (8) 70a Durometer Poly Bushing (Black in color)
- 1.5.4. (8) 80a Durometer Poly Bushing (Gray in color)
- 1.5.5. (8) 90a Durometer Poly Bushing (Blue in color)
- 1.5.6. Hardware Bag
 - 1.5.6.1. (4) M12 x 1.75 (Hex Head Bolt) x 70mm Long, Stainless
 - 1.5.6.2. (4) M12 x 1.75 Flange Nut, Stainless
 - 1.5.6.3. (4) Bolt Sleeve, Center Bushing

**2. Mk5 Toyota Supra Engine Mount Install**

- 2.1. Verus Engineering is not responsible for damage to you or your vehicle by following this manual and/or installing Verus Engineering products.
- 2.2. We begin by gaining access to underneath the hood. Pop the hood and open it.
- 2.3. Unplug and unclip both O2 sensor harnesses so that the wires are free hanging. ***Ensure the exhaust is not hot before letting them sit on potential hot points***

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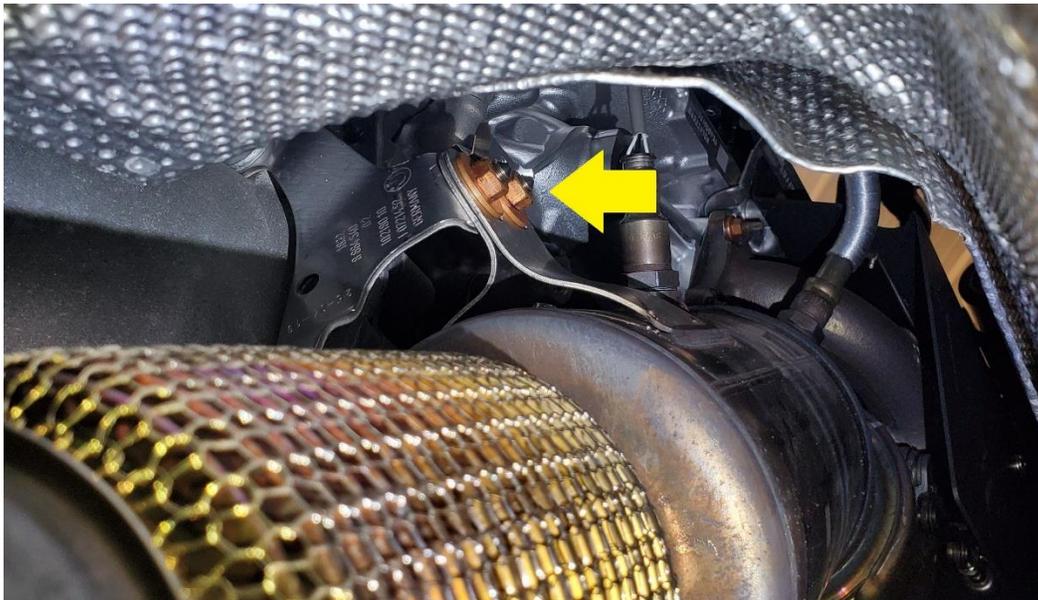


- 2.4. Remove turbo heatshield if applicable.
- 2.5. Jack up and support the vehicle.
- 2.6. Remove downpipe at turbo. For some, removing the whole exhaust system after the turbo will be a lot easier.
 - 2.6.1. Start by loosening the V-band clamp around the turbo connection.

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2.6.2. Remove two 13mm downpipe bracket nuts.

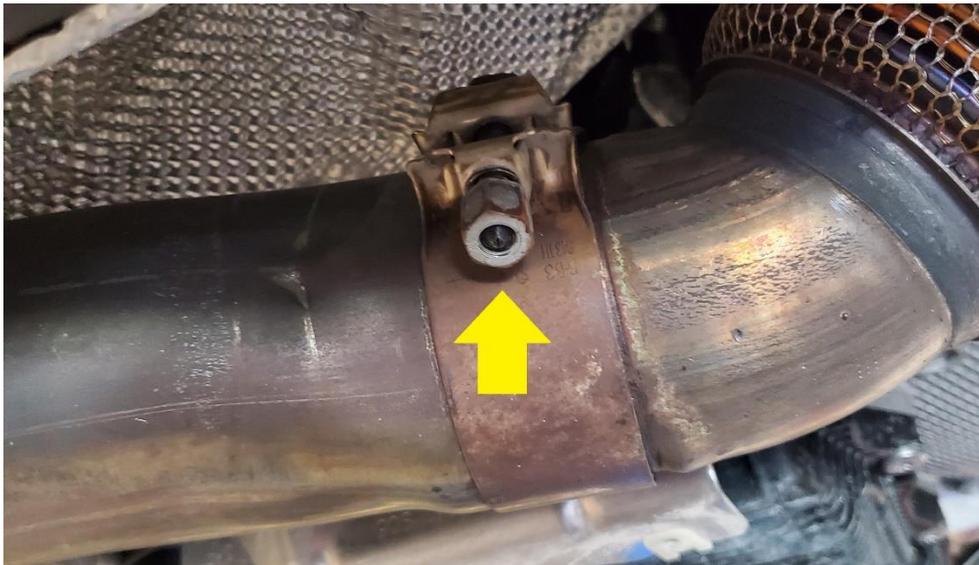


2.6.3. Unbolt the transmission mounted exhaust hanger. (13mm nut)

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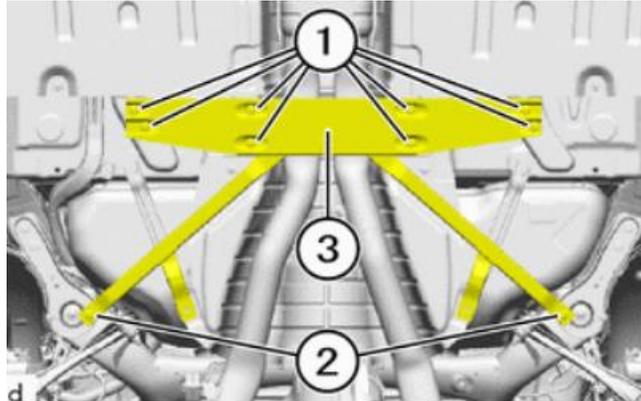


2.6.4. Loosen the rear exhaust clamp connection for the downpipe.



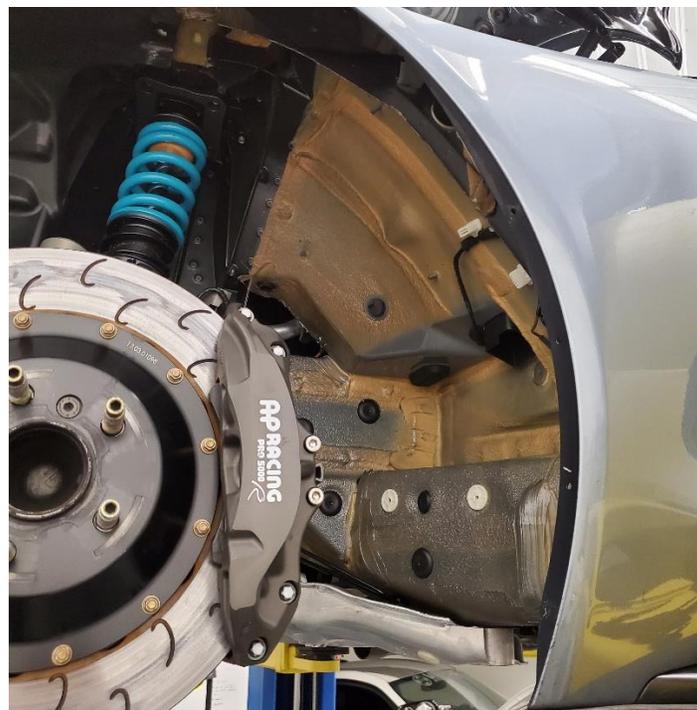
2.6.5. Remove the visible bolts for the chassis brace. This will allow the exhaust to hang down slightly.

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2.6.6. With everything loose, pry the downpipe away from the mounting bracket studs from and remove from car.

2.7. Remove the rear section of the driver side fender liner by using the 8mm socket.

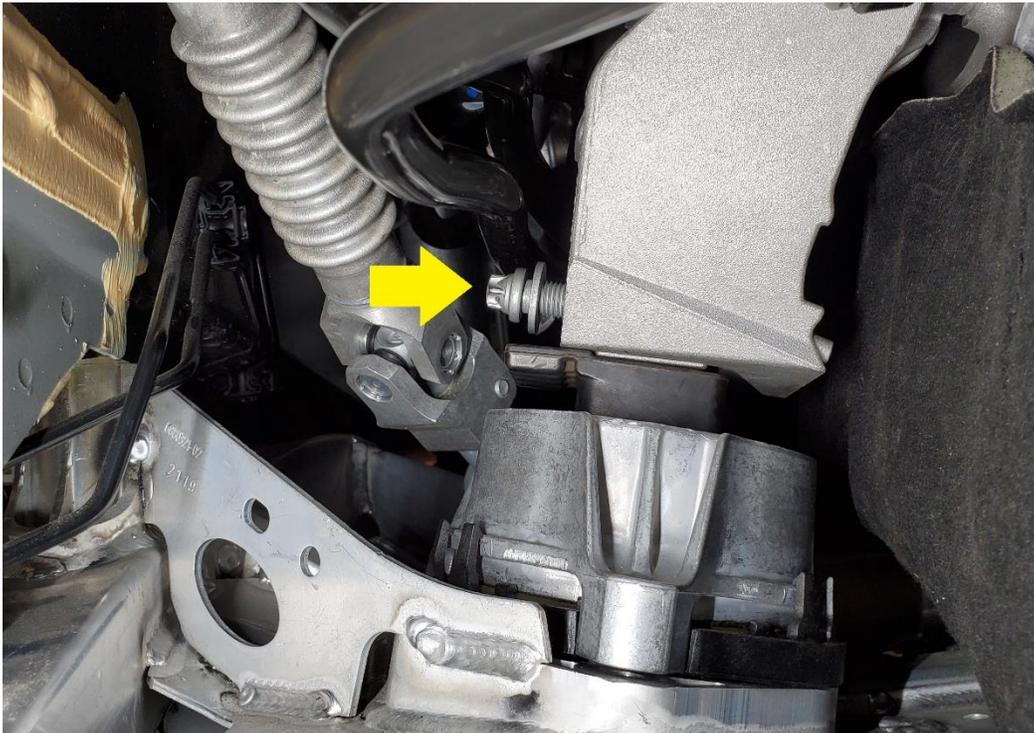


2.8. Using a jack and a block of wood, so as not to damage anything, support the engine by the bellhousing in front of the transmission oil pan. For now, we only want slight pressure. We are just supporting the engine to take some load off of the engine mounts.

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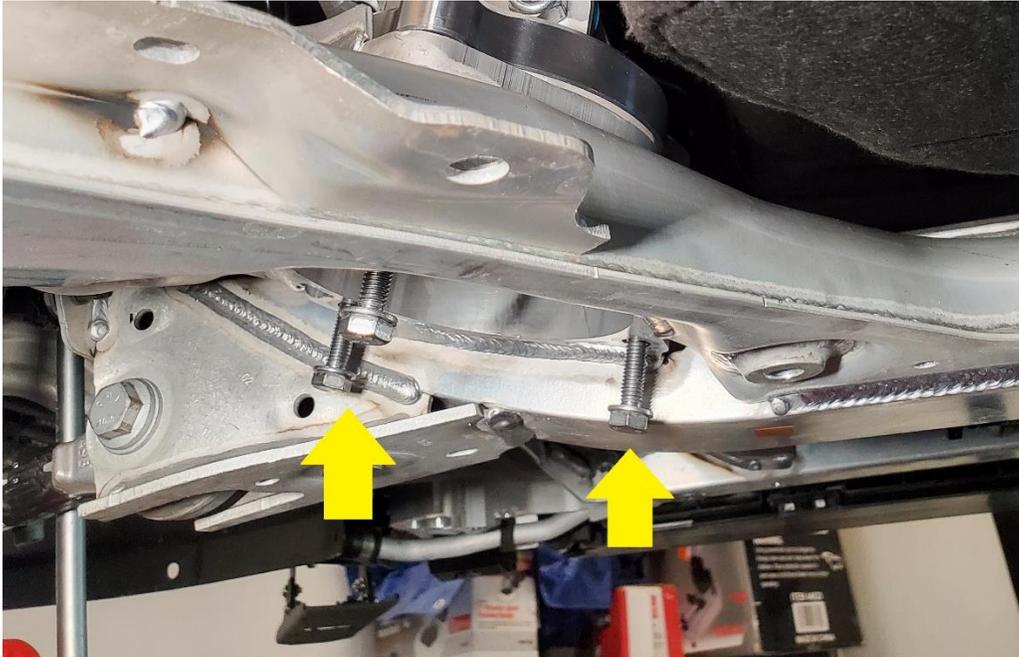


- 2.9.** Using the E14 socket, break the engine mount isolator bolt loose. Do not remove the bolt at this time.



- 2.10.** Using the 13mm socket, break the engine mount base bolts loose (three for each mount). Do this for BOTH mounts.

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**2.11.** Remove the driver side engine mount.

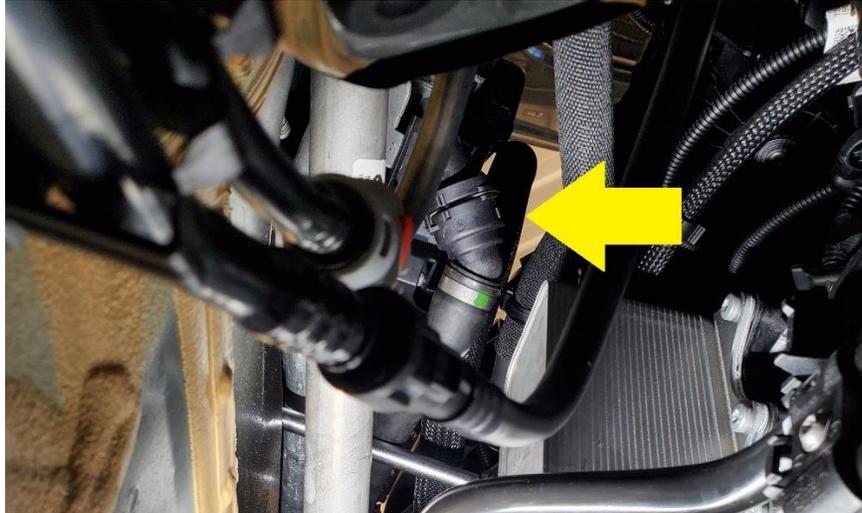
2.11.1. With the wheel liners removed you will notice that there are two “windows” where you get a small view of where you will be working. ***Picture below if from wheel well looking towards engine bay***



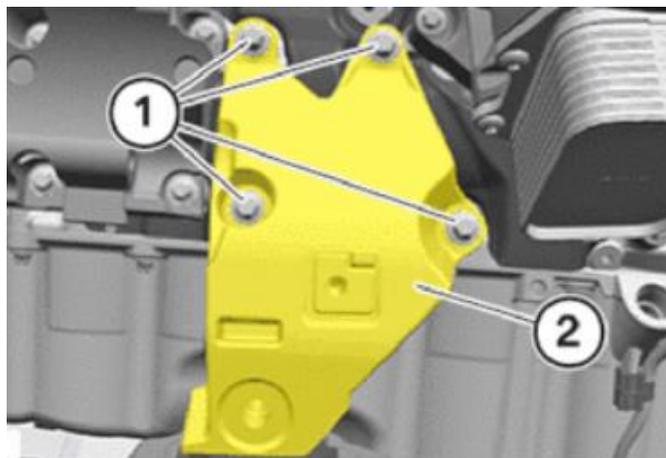
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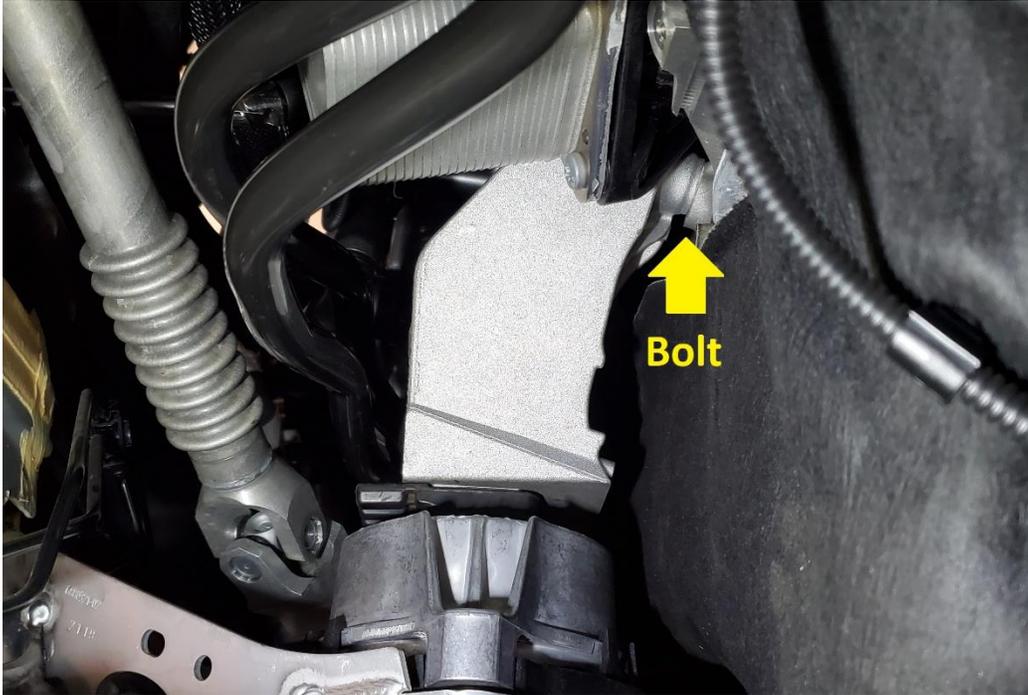
2.11.2. In order to make some more room, un-clip the hoses from the brackets shown in the pictures below.



2.11.3. There are four bolts holding the engine mount bracket to the engine block. Using an E12 socket, remove the lower two bolts first. They are in pockets and are at a slight upward angle so you will not be able to see the bolts. This will have to be done by feel. We used a 4" extension, universal swivel socket, E12 socket, and flex head ratchet.



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2.11.4. Next, remove the upper bolts using a similar strategy. This time we used a long extension to go through the “upper window”.



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2.11.5. With the engine mount bracket bolts removed, the entire assembly should be able to move around freely.

2.11.6. Remove the E14 bolt that was loosened in **2.10**.

2.11.7. Remove both the engine mount and engine mount bracket one at a time. You may find it easier to remove the engine mount first. You will need play with the two pieces to get them separated and out. If you think that there is not enough room to do this, you may need to jack the engine up further. **HOWEVER**, be sure to first check that you have enough movement with hoses, wire harnesses etc. before jacking the engine up further.

2.12. Assemble, and install the driver side engine mount.

2.12.1. First, select the bushings that you want to use. Three different durometers are provided. **We recommend 70A for most cases.**



Durometer



2.12.2. Using some automotive grade (preferably high temp) grease, lubricate the outside of the bushing bolt sleeve, inside of the bushing retainer, and outside of the bushings themselves with a thin coat of grease. We recommend sil-glyde.

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2.12.3. Press the bushings into the bushing retainer followed by the bolt sleeve.



2.12.4. Push the bushing retainer into the base, and assemble the engine mount using the M12 bolts and nyloc nuts. Torque to 60 ft-lbs. Note: a dab of Loctite for extra security does not hurt either.

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2.12.5. Install the engine mount and engine mount bracket in the reverse order. Start all bolts first. Torque the E12 bolts to 28 ft-lbs.

2.12.6. Fully thread in the E14 bolt that holds the engine mount to the engine mount bracket by hand.

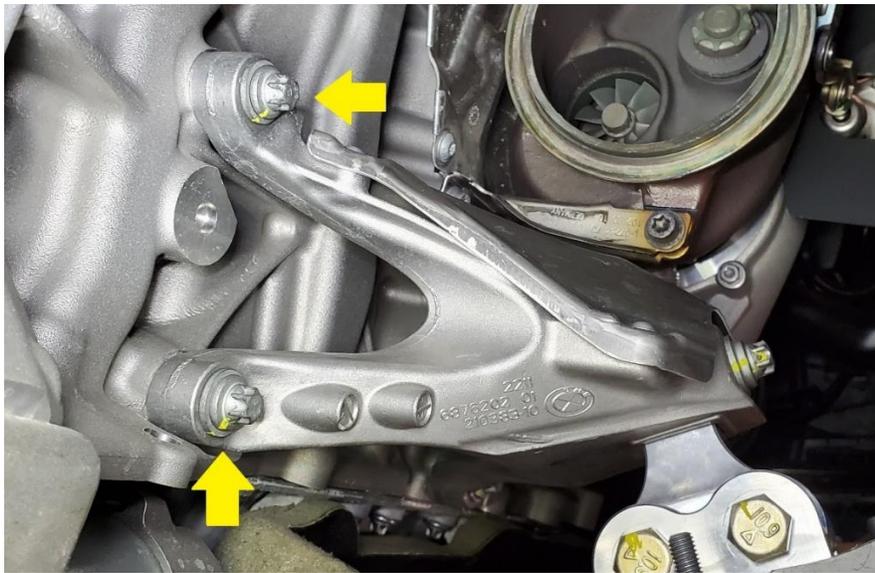
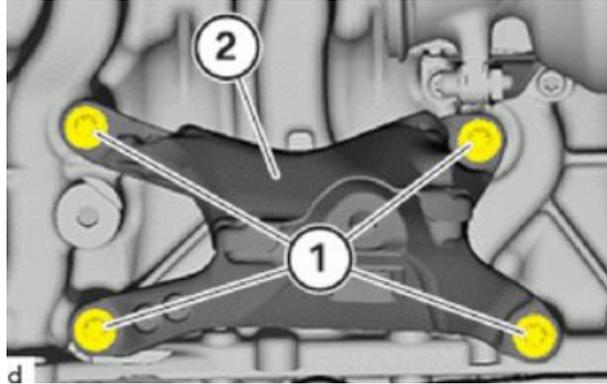
2.12.7. Reattach the hose bracket that was undone in **2.12.2**.

2.13. Remove the passenger side engine mount and bracket.

2.13.1. Start by fully removing the E14 bolt that was loosened in **2.10**.

2.13.2. Next, remove the E12 bolts holding the engine mount bracket to the engine block. This side will be very easy in comparison to the driver side. Use an extension and E12 socket to remove the bolts.

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2.13.3. Remove the engine mount and bracket in the same manner as the driver side.

2.14. Assemble, and install the passenger side engine mount.

2.14.1. Assembling the engine mount is the same process as outlined above in **2.13.1 – 2.13.4.**

2.14.2. Install the engine mount and bracket in the same manner as the driver side.

2.14.3. Torque the E12 bolts to 28ft-lbs.

2.14.4. Fully thread in the E14 bolt that holds the engine mount to the engine mount bracket by hand.

2.15. The engine is now ready to come back down on to the sub frame.

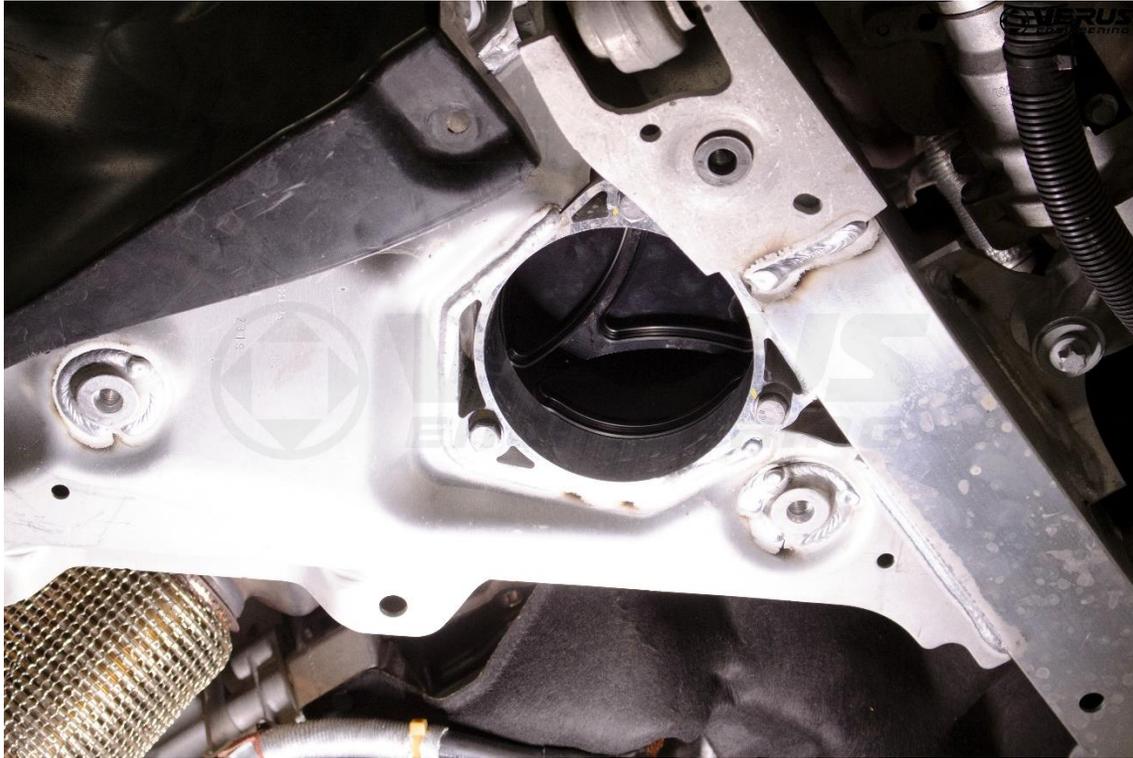
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- 2.16. Lower the engine so that it is sitting just above the sub frame, and start the engine mount base bolts.
- 2.17. Once the engine mount base bolts are started, lower the engine completely, and torque the bolts to 14 ft-lbs.
- 2.18. Torque the E14 bolt on both mounts to 74 ft-lbs.
- 2.19. Reassemble the rest of the components in reverse order.
- 2.20. Be sure to route the O2 sensor harnesses correctly and plug them in.
- 2.21. Congratulations on installing the Verus Engineering Engine Mount kit on the Mk5 Toyota Supra.
- 2.22. Please send any questions, comments, concerns, or photos to Verus Engineering via e-mail; sales@verus-engineering.com.



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